UNITED STATES PATENT AND TRADEMARK OFFICE

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10/806,980	03/22/2004	Yin L. Cheung	33849-8	2205

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EXAMINER
NGUYEN, PHU K

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Please find below and/or attached an Office communication concerning this application or proceeding.

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte YIN L. CHEUNG, MICHAEL J. ZEITLIN,
and MARK ACOSTA

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Appeal 2009-013338
Application 10/806,980
Technology Center 2600

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Before KENNETH W. HAIRSTON, MAHSHID D. SAADAT,
and BRADLEY W. BAUMEISTER, *Administrative Patent Judges.*

SAADAT, *Administrative Patent Judge.*

DECISION ON APPEAL[1]

_____

[1] The two month time period for filing an appeal or commencing a civil
action, as recited in 37 C.F.R. § 1.304 or for filing a request for rehearing as
recited in 37 C.F.R. § 41.52, begins to run from the "MAIL DATE" (paper
delivery mode) or the "NOTIFICATION DATE" (electronic delivery mode)
shown on the PTOL-90A cover letter attached to this decision.

Appellants appeal under 35 U.S.C. § 134(a) from a Final Rejection of claims 1-52, which constitute all the claims pending in this application. An oral hearing was conducted on this appeal on July 14, 2010. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

STATEMENT OF THE CASE

Appellants' invention relates to a system and method for analyzing and imaging 3D volume data sets using a 3D sampling probe. The method involves imaging a 3D volume defined by a data set of voxels, each voxel expressed in the form of (x, y, z, data value). (Spec. ¶ [0010]; Fig. 15). Claim 1, which is illustrative of the invention, reads as follows:

> 1. A program storage device readable by a machine, the device tangibly embodying a program of instructions executable by the machine to perform method steps of imaging a three-dimensional (3D) volume, the method steps comprising:
>
> creating one or more three-dimensional (3D) sampling probe(s), wherein each 3D sampling probe is a sub-volume of the 3D volume;
>
> drawing an image of the 3D sampling probe(s) the image comprising an intersection of the 3D sampling probe(s) and the 3D volume; and
>
> repeating the drawing step responsive to movement of the 3D sampling probe(s) within the 3D volume so that as the 3D sampling probe(s) moves through the 3D volume, the image of the 3D sampling probe(s) is redrawn substantially at the same time as the 3D sampling probe is moved.

The Examiner rejected claims 1-52 under 35 U.S.C. § 103(a) as obvious over Holden.[2]

Rather than repeat the arguments here, we make reference to the Briefs and the Answer for the respective positions of Appellants and the Examiner.

ISSUE

The Examiner reads substantially all the claimed limitations on Holden's disclosure and specifically asserts that the step of "repeating the drawing step responsive to movement of the 3D sampling probe(s) within the 3D volume so that as the 3D sampling probe(s) moves through the 3D volume, the image of the 3D sampling probe(s) is redrawn substantially at the same time as the 3D sampling probe is moved" is met by modifying Holden's disclosure on page 9-22 (Ans. 3-4). The Examiner states that while Holden does not specifically teach "the image of the 3D sampling probe(s) is redrawn substantially at the same time as the 3D sampling probe is moved," it would have been obvious to "provide the sample probe at substantially the same time as the probe is moved for the purpose of enhancing the interaction of the user to viewing the 3D voxel data" (Ans. 4).

Appellants contend that the description in Chapter 9 of Holden for editing a volume along a selected axis using slider bars indicates that the image of the edited subvolume is not re-rendered until the slider bar is released (App. Br. 19). In that regard, Appellants assert that the image of the subvolume in the rendering window includes the edits after they are

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[2] PAUL HOLDEN, VOXELGEO 1.1.1, PRODUCTIVITY TOOL FOR THE GEOSCIENCES (Vital Images Inc. 1994).

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made, and not as they are made (*id.*). Appellants further contend (App. Br. 21-25) that the modification proposed by the Examiner lacks any basis, reasoning, or support other than improperly relying on Appellants' Specification.

Therefore, the issue is whether the Examiner erred in rejecting the claims by modifying Holden to arrive at the claimed subject matter in claim 1, specifically the step of "repeating the drawing step responsive to movement of the 3D sampling probe(s) within the 3D volume so that as the 3D sampling probe(s) moves through the 3D volume, the image of the 3D sampling probe(s) is redrawn substantially at the same time as the 3D sampling probe is moved."

PRINCIPLES OF LAW

> Section 103 forbids issuance of a patent when "the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains."

KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 406 (2007).

A step in the obviousness analysis is to "determine whether there was an apparent reason to combine the known elements in the fashion claimed." *Id.* at 418. A rejection for obviousness must include "'articulated reasoning with some rational underpinning to support the legal conclusion.'" *Id.* (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)). The proper question to ask is whether a person of ordinary skill in the art would have seen a benefit to combining the prior art teachings. *Id.* at 424.

ANALYSIS

We agree with Appellants' argument (Reply Br. 4-7) that the volume editing shown in the figure on page 9-21 of Holden only allows redrawing the image of the subvolume after the edits are done, instead of the claimed redrawing the image of the 3D sampling probe(s) substantially at the same time as the 3D sampling probe is moved. As pointed out by Appellants (*id.*), we find that while Holden provides for editing the volume using the slider bars (p. 9-19), the image of subvolume data at a new location is revealed after the subvolume is reconstructed at the new location (pp. 9-21 through 9-22).

Additionally, we disagree with the Examiner (Ans. 12-13) that it would have been obvious to one of ordinary skill in the art to modify the disclosure of Holden to redraw the image of the 3D sampling probe(s) substantially at the same time as the 3D sampling probe is moved. While Holden discloses system components that might be useful in fast image rerendering, the Examiner has not provided a convincing rationale for modifying Holden to arrive at the claimed feature. As specified by Appellants (Reply Br. 7), Holden does not redraw the edited subvolume until the mouse is released after moving one of the slider bars (p. 9-22). As such, Holden would not be concerned with redrawing the image of the 3D sampling probe(s) substantially at the same time as the 3D sampling probe is moved because the redrawing of image does not need to take place when the slider bar is moved. Therefore, we do not find that the Examiner's rejection includes "articulated reasoning with some rational underpinning to support the legal conclusion." *See Kahn*, 441 F.3d at 988.

CONCLUSION

On the record before us and in view of the analysis above, we find that the Examiner erred in rejecting the claims by modifying Holden to arrive at the claimed subject matter in claim 1, specifically the step of "repeating the drawing step responsive to movement of the 3D sampling probe(s) within the 3D volume so that as the 3D sampling probe(s) moves through the 3D volume, the image of the 3D sampling probe(s) is redrawn substantially at the same time as the 3D sampling probe is moved." Other independent claims 21, 24, 27, 47, and 50 also include the same feature related to redrawing the image of the 3D sampling probe. Therefore, we do not sustain the 35 U.S.C. § 103 rejection of claims 1, 21, 24, 27, 47, and 50, nor of claims 2-20, 22, 23, 25, 26, 28-46, 48, 49, 51, and 52 dependent thereon.

ORDER

The decision of the Examiner rejecting claims 1-52 is reversed.

REVERSED

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